Amendments to the Specification

Please replace the title at page 1, lines 1 through 2 with the following amended title:
~~ANTI-TNF ANTIBODIES AND PEPTIDES OF HUMAN TUMOR NECROSIS FACTOR~~
METHODS OF TREATING PSORIASIS WITH ANTI-TNF ANTIBODIES

Please replace the title at page 159, lines 1 through 2 with the following amended title:
~~ANTI-TNF ANTIBODIES AND PEPTIDES OF HUMAN TUMOR NECROSIS FACTOR~~
METHODS OF TREATING PSORIASIS WITH ANTI-TNF ANTIBODIES

Please replace the paragraph at page 1, lines 4-19 with the following amended paragraph:

This application is a continuation of U.S. Application Serial No. 09/756,398, filed January 8, 2001, which is a divisional of U.S. Application Serial No. 09/133,119, filed August 12, 1998, which is a divisional of U.S. Application Serial No. 08/570,674, filed December 11, 1995, which is a continuation-in-part of U.S. Application Serial No. 08/324,799, filed October 18, 1994, now U.S. Patent No. 5,698,195, issued December 16, 1997, which is a continuation-in-part of U.S. Application Serial Nos. 08/192,102, now U.S. Patent No. 5,656,272, issued August 12, 1997, 08/192,861, now U.S. Patent No. 5,919,452, issued July 6, 1999, and 08/192,093, now U.S. Patent No. 6,284,471, issued September 4, 2001, all filed on February 4, 1994 which are continuations-in-part of U.S. Application Serial No. 08/010,406, filed January 29, 1993, now abandoned, and U.S. Application Serial No. 08/013,413, filed February 2, 1993, now abandoned, which is a continuation-in-part of U.S. Application Serial No. 07/943,852, filed September 11, 1992, now abandoned, which is a continuation-in-part of U.S. Application Serial No. 07/853,606, filed March 18, 1992, now abandoned, which is a continuation-in-part of U.S. Application Serial No. 07/670,827, filed March 18, 1991, now abandoned. Each of the above applications are entirely incorporated herein by reference.

Please replace the paragraph at page 15, line 21 through page 16, line 3 with the following amended paragraph:

Figures 33A-33H are graphical representations of analyses of binding between the various fusion proteins and TNFα by saturation binding (Figure 33A and 33B) and Scatchard analysis (Figure 33C-33H). A microtiter plate was coated with excess goat anti-Fc polyclonal antibody and incubated with 10 ng/ml of fusion protein in TBST buffer (10 mM Tris-HCl, pH 7.8, 150 mM NaCl, 0.05% ~~Tween 20~~ TWEEN® 20) for 1 hour. Varying amounts of ^{125}I labeled TNFα (specific activity - 34.8 μCi/μg) were then incubated with the captured fusion protein in PBS (10 mM Na Phosphate, pH 7.0, 150 mM NaCl) with 1% bovine serum albumin for 2 hours. Unbound TNFα was washed away with four washes in PBS and the cpm bound was quantitated using a y-counter. All samples were analyzed in triplicate. The slope of the lines in (Figures 33C-H) represent the affinity constant, K_a. The dissociation constant (K_d) values (see Table 1) were derived using the equation $K_d=I/K_a$.

Please replace the paragraph under Table 2 on page 84 with the following amended paragraph:

Values represent mean concentrations of IL-6 of duplicate wells, in ng/ml. RhTNF (Suntory, Osaka, Japan), with or without 4 μg/ml antibody, was added to cultures of FS-4 fibroblasts and after 18 h, the supernatant was assayed for IL-6 using the ~~QUANTIKINE~~ QUANTIKINE® Human IL-6 Immunoassay (from R&D Systems, Minneapolis, MN). Control mAb = chimeric mouse/human IgG1 anti-platelet mAb (7E3).

Please replace the paragraph at page 89, line 16 through line 19 with the following amended paragraph:

Sodium dihydrogen phosphate (31.2 g, Sigma cat # S-0751 or equivalent) and sodium dodecylsulfate (20.0 g, Sigma cat # L-3771 or equivalent) were dissolved in 2.0 L of ~~milliQ~~ MILLI-Q® water. The pH was adjusted to 7.2 ± 0.1 with 50% w/w sodium hydroxide (VWR cat # VW6730-3 or equivalent).

Please replace the paragraph at page 89, line 21 through page 90, line 3 with the following amended paragraph:

Sodium dihydrogen phosphate (0.39 g, Sigma cat #S-0751 or equivalent) disodium hydrogen phosphate (1.07 g, Baker cat # 3828-1 or equivalent) and sodium chloride (8.50 g, Baker cat # 3624-5 or equivalent) were dissolved in 1.0 L of ~~milliQ~~ MILLI-Q® water. The pH was adjusted to 7.2 ± 0.1 with 50% w/w sodium hydroxide (VWR cat VW6730-3 or equivalent). Chicken egg albumin (10.0 g, Sigma cat #A-5503 or equivalent) and bovine serum albumin (10.0 g, Sigma, cat #A-3294 or equivalent) were dissolved at room temperature with gentle stirring. The solution was filtered, and to the solution was added ~~Tween 20~~ TWEEN® 20 (2.0 ml, Sigma cat #P-13.79 or equivalent). The solution was stirred gently at room temperature for 30 min, filtered and stored at 40°.

Please replace the paragraph at page 90, line 4 through line 11 with the following amended paragraph:

PBS/~~Tween 20~~ TWEEN® 20

A 10 x concentrate was prepared by dissolving sodium dihydrogen phosphate (3.90 g, Sigma cat # S-0751 or equivalent), disodium hydrogen phosphate (10.70 g, Baker cat #3828-1 or equivalent) and sodium chloride (85.0 g, Baker cat #3624-5 or equivalent) in 1.0 L of ~~milliQ~~ MILLI-Q® water. The pH was adjusted to 7.2 ± 0.1 with 50% w/w sodium hydroxide (VWR cat #VW 6730 or equivalent). To the solution was added ~~Tween 20~~ TWEEN® 20 (5.0 mL, Sigma cat #P-1379 or equivalent), and the mixture stirred gently. Just prior to use 100 mL of this solution was diluted to 1.0 L with ~~milliQ~~ MILLI-Q® water.

Please replace the paragraph at page 90, line 13 through line 19 with the following amended paragraph:

Substrate buffer was prepared by dissolving citric acid (4.20g, Malinckrodt cat #0627 or equivalent) and disodium hydrogen phosphate (7.10 g, Baker cat #3828-1 or equivalent) in 1.0 L of ~~milliQ~~ MILLI-Q® water. The pH was adjusted to 5.00 with 50% w/w sodium hydroxide (VWR cat #VW6730-3 or equivalent). Immediately prior to use an OPD substrate tablet (30 mg, Sigma cat #P-8412 or equivalent and 30% (v/v) hydrogen peroxide (40 μL, Sigma cat #P-1379 or equivalent) were added to the substrate buffer 25.0 mL). The solution was wrapped in foil and mixed thoroughly.

Please replace the paragraph at page 90, line 21 through line 22 with the following amended paragraph:

Sulfuric acid (53 mL, EM Science cat #SX1244-5 or equivalent) was slowly added to ~~MILLI-Q~~ MILLI-Q® water (447 mL) and cooled to room temperature prior to use.

Please replace the paragraph at page 91, line 4 through line 9 with the following amended paragraph:

Prior to use and after each subsequent use the peptide pins were cleaned using the following procedure. Disruption buffer (2.0 L) was heated to 60° and placed in an ultra-sonic bath in a fume hood. To the disruption buffer was added dithiolthreitol (2.5 g, Sigma cat #D-0632 or equivalent). The peptide pins were sonicated in this medium for 30 min, washed thoroughly with ~~milliQ~~ MILLI-Q® waster, suspended in a boiling ethanol bath for 2 min, and air-dried.

Please replace the paragraph at page 91, line 10 through line 27 with the following amended paragraph:

Blocking buffer (200 μL) was added to a 96 well disposable polystyrene Elisa plate and the peptide pins suspended in the wells. The peptide pins and plate were incubated for 2 hours at room temperature on an oscillating table shaker. The plates and peptide pins were washed with PBS/~~Tween 20~~ TWEEN® 20 (four times). To each well was added a 20 μg/ml concentration of cA2 antibody (diluted with blocking buffer, 175 μL/well). TNF competition was done by incubation of TNFα (40 μg/ml) and cA2 (20 μg/ml) in BSA/ovalbumin/ BBS for three hours at room temperature. The peptide pins were suspended in the plate and incubated at 4° overnight. The peptide pins and plate were washed with PBS/~~Tween 20~~ TWEEN® 20 (four times). To each well was added anti-human goat antibody conjugated to horseradish peroxidase (diluted with blocking buffer to 1/2000, 175 μL/well, Jackson IMMUNORESEARCH Labs). The peptide pins were suspended in the plate, and incubated for 1 hour at room temperature on a oscillating table shaker. The plates and peptide pins were washed with PBS/~~Tween 20~~ TWEEN® 20 (four times). To each well was added freshly prepared substrate solution (150 μL/well), the

peptide pins were suspended in the plate and incubated for 1 hour at room temperature on an oscillating table shaker. The peptide pins were removed and to each well is added 4N H_2SO_4 (50 μL). The plates were read in a Molecular Devices plate reader (490 nm, subtracting 650 nm as a blank), and the results are shown in Figures 14A and 14B, as described above.

Please replace the paragraph at page 128, line 22 through line 26 with the following amended paragraph:

The patient is a 41 year old woman with long term ulcerative colitis, which was diagnosed by endoscopy and histology. She has a pancolitis, but the main disease activity was left-sided. There were no extra-intestinal complications in the past. Maintenance therapy consisted of ~~Asacol~~™ ASACOL®. Only one severe flair-up occurred 4 years previously and was successfully treated with steroids.

Please replace the paragraph at page 128, line 27 through page 129, line 2 with the following amended paragraph:

At beginning month one, she was admitted elsewhere because of a very severe flair-up of the ulcerative colitis. Treatment consisted of high doses of steroids intravenously, antibiotics, ~~asacol~~ ASACOL® and Total Parental Nutrition. Her clinical condition worsened and a colectomy was considered.

Please replace the paragraph at page 129, line 3 through line 10 with the following amended paragraph:

At end of month one, she was admitted at the internal ward of the AMC. Her main complaints consisted of abdominal pains, frequent water stools with blood and mucopus and malaise.

Medication: ~~ASACOL~~ ASACOL® 2 dd 500 mg, orally
Di-Adresone-T 1 dd 100--mg, intravenously
Flagyl 3 dd 500 mg, intravenously
Fortum 3 dd 1 gram, intravenously

Total parental nutrition via central venous catheter

Please replace the paragraph at page 153, line 2 through line 13 with the following amended paragraph:

A comparison was made of the binding affinity of various fusion proteins and TNFα by saturation binding (Figures 33A and 33B) and Scatchard analysis (Figures 33C-33H). A microtiter plate was coated with excess goat anti-Fc polyclonal antibody and incubated with 10 ng/ml of fusion protein in TBST buffer (10 mM Tris-HCl, pH 7.8, 150 NaCl, 0.05% ~~Tween-20~~ TWEEN® 20) for 1 hour. Varying amounts of ^{125}I labeled TNFα (specific activity - 34.8 μCi/μg) was then incubated with the captured fusion protein in PBS (10 mM Na Phosphate, pH 7.0, 150 mM NaCl) with 1% bovine serum albumin for 2 hours. Unbound TNFα was washed away with four washes in PBS and the cpm bound was quantitated using a y-counter. All samples were analyzed in triplicate. The slope of the lines in (Figures 33C-H) represent the affinity constant, K_a. The dissociation constant (K_d) values (see Table 1) were derived using the equation $K_d = 1/K$.